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ABSTRACT

To analyze listening in relationship to other communication modes and to investigate the relative utility of four models for communication theory building research (national, psychological, organizational culture, and situational), a study examined the attitudes of middle level managers of six corporations regarding communication competencies necessary for success in business. Twenty-eight subjects from six business organizations in the United States and Australia each completed eight survey instruments. Findings indicated that while a situational paradigm would generate far more significant differences on a variety of instruments drawn from diverse kinds of research in the discipline, each research model probably has some utility for analysis of theory building data. Findings also indicated that listening is the most important communication mode needed by managers in organizations, with interactive listening behaviors perceived as most important (from a list of ten specific communication behaviors rated by managers as most important in the organizational environment, five were listening behavior categories). (Thirty-four tables of data are included. An appendix contains the items from four of the survey instruments; 28 references are attached.) (SR)

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A STUDY OF LISTENING ACROSS THREE SITUATIONAL VARIABLES

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A STUDY OF LISTENING ACROSS THREE SITUATIONAL VARIABLES

There has been considerable research of numerous communication variables. Much of that research has examined various speaking and listening variables. A fair amount of that research has been in applied settings, particularly organizational settings. There are some concerns about the research. First, much of the research has involved either speaking or listening but not both. Second, most of the research has been conducted within the perspective of only one of several theoretical approaches. Third, the research has tended to involve relatively short measures of a large number of subjects. Although the body of research has been very useful, there are some concerns. There is a concern that the research taps a superficial layer of subjects' attitudes. Therefore, this paper will report a study of middle level managers of six corporations who were measured in depth in order to assertain their attitudes toward needed communication competencies for success in business. The research provides data in order to make analyses of listening in relationship to other communication modes and of the relative utility of four models for communication theory building research. This study should be particularly useful as a study of listening behavior in that the focus is not just on listening in isolation but rather on listening in relationship to other communication modes.

QUESTIONS

The first research question is: "What is the relative utility of four theoretical approaches to the study of communication research?" In other words, what communication theoretical approach is most useful in generating information about communication practices?

Previous communication research has suggested that to some extent individual human beings are influenced in how they construct, perform, and interpret feedback by their cultural environment (Jackson, 1985). Jackson and others make the point that our cultural values determine what we communicate and how we communiate. Much of the recent research into organizational communication from a cultural perspective has been included for publication (Gudyknust, 1985a; Putnam & Pacnowsky, 1983) and has generted two divergent lines of subsequent research and analysis. One line treats the organizational cultural variable as external in the sense that it looks at how factors outside the specific organization impinge upon the way the organization functions (Hirokawa & Miyahara, 1986; Cushman and King, 1985; Gudyknust 1985b). The second line treats the organizational culture variable as internal in the sense that it looks at how the aspects of divison of labor, style, role function have evolved a corporate saga (Bormann, 1983; Putnam & Pacnowsky, 1983). Indeed, the concept of culture and communication has been well established as a valid paradigm in the commuication discipline.

There is an even longer tradition of communication research which has suggested that to some extent human communication behavior, like and a part of all human behavior, is to be explained by individual characteristics; that is, a psychological perspective. The research and speculation into the psychological explanation of communication has led to several important lines of study. Source credibilty studies have contributed considerably to our knowledge of the process of commnication (McCroskey, 1968; Anderson, 1971). Studies of macheivellian traits have provided insights to how humans process and formulate communication (Burgoon, 1971; Williams, Hazelton, & Renslaw, 1975). In recent years, a body of work has evolved which posits that humans have uniquelly individual abilities for cognitively processing information (Crockett, 1975; Delia, 1980; Irwin, 1984; Hale, 1976). Indeed, the concept

of psychological nature of individuals has been well established as a valid paradigm in the comunication discipline.

A third line of communication research has sought to explain communiation in terms of humans associative or social nature. The body of research which begins with Goffman (1976) has led to a considerable amount of research in the communication discipline. The notion of Goffman that people play roles in a social environment has culminated most recently in the research which suggests that communication roles serve as predictors of organizational satisfaction and goal achievement (Cummings, Long, & Lewis, 1983). Indeed, the concept of social interaction as a legitimate perspective for viewing communication behavior has been well established as a valid paradigm in the communication discipline.

The fourth level of communication research is the notion that communication behavior is best understood in the context of situational circumstances. This paradigm suggests that the process by which message sources manage to extend messages to receivers and/or construct message meanings with receivers is fundamentally a function of circumstances unique to the particular situation(e.g. specific time, place, local culture, needs, motivations, competencies). The theoretical work of Pierce and Saussure synthesized by Fiske (1982) argues that the receiver and message text together produce a preferred meaning out of the situationally unique circumstances. In the more popular realm, the work has been exemplified by Terkel's Working (1972). In the organizational communication realm, Pacnowsky's "Small Town Cop" (1983) serves as an example. An assumption of the situational paradigm underlies the model for identification of communication competencies argued by Tuttle (1983) that it is necessary to look at individuals' perceptions of how they routinely place themselves in communication situations. There is evolving a general paradigm which suggests that communication is very situationally based; thus, to understand and even to predict communication it is necessary to focus more investigation on the nature of situationally controlled communication processes.

The second research question is: "What are the relative needs people have for the various kinds of communication." Specifically, what is the relative significance of listening behaviors in relationship to speaking, writing, reading, and computing? Further, what is the relative significance of listening functions and practices to other communication functions and practices?

The standard reply given to any question about the relationship of modes of communication is still, quite often, the results of Rankin's (1926) original studies. More contemporary studies have tended to confirm about the same relationship between listening, speaking, writing, and reading (Metts, 1985). It is perhaps useful to assertain if the same relationahip of the modes reported by Rankin is valid today and if the relationshp is valid for a more specific population(i.e. mid level managers). During the past fifteen years, computers have become more of an intrusive part of organizational work. Any contemporary study of the relationship between communication modes must now provide for computing as one of the categories, thus expnding the modes from the four of listening, speaking, writing, reading to include computing as a fifth mode, computing.

The third research question is: "What is the relationship between organizational change and the modes of communication?" Do those who have a pro change personal preference tend to have a different perspective on the way people ought to communicate than those who are less pro change in their personal preference?

The concept of pro change attitudes in organization has been well argued by the likes of Naisbitt and Aburdene (1985) and Peters and Waterman (1986). If, as they argue, that organizations with individuals who have pro change attitudes are more likely to succeed into the twenty-first century, it would be instructive to know how the pro change persons tend to view communication modes, roles, functions, needs.

METHODOLOGY

In order to begin answering the three research questions, it was determined that data would be collected regarding expected and needed communication practices from a relatively small number of subjects, who hold a fairly similar organizational management level, with an intensified set of measures of each subject. Appropriate questions would make it posible to classify each subject according to nationality, cognitive complexity, type of organization to which subject belongs, and specific organizational membership. The rationale for these four classifications is to be able to test four research models for their utility in research and theory building: national, psychological, organizational culture, situational.

Twelve instruments were used in the overall research project. Twenty eight subjects were asked to make 253 responses on the twelve measuring instruments. Data from eight of the instruments will be reported here in order to provided some answers to the three research questions. Two organizations were in the United States: 1) Standard Oil of Indiana, industrial/commercial category; 2) Northern Illinois District of the United Way, service category. Four organizations were in Australia: 1) Wellcome Pharmaceuticals, industrial/commercial category; 2) Ethnor Pharmaceuticals, industrial/commercial category; 3) International Medical, industrial/commercial category; 4) Western Australian Crippled Children Society, service category. The eight instruments were valid in that the items used were drawn from substantial lines of research on relavent communication variables. The instruments and the separate rationales are described below.

The first instrument measured the frequency with which each of the five communication modes is used in the work environment. The instrument is modified from Rankind's original work (Rankin, 1926) which included four modes: writing, speaking, listening, and reading. Computing was added to the list making five modes in the instrument used in this research.

The next three instruments (job needs frequency, own personal frequency of communication problems of employees generally, and own personal communication problems) are three different measures using the same worded items. The common items are combinations of the four modes of communicating, reading, writing, listening, speaking) in relation to size of the receiving audience (individual, groups) and direction of the communication with respect to the organization (within and outside). Cummings, Long, & Lewis (1983) have developed the instruments as part of research into the relationship between communication function and job satisfaction. They have observed that a job situation may have a set of normative communication expectations called job needs while at the same time the individual person performing in the job situation may have some communication needs which are somewhat personal in nature; and thus not part per se of the needs dictated by the job itself. Therefore, any attempt to measure communication needs should measure the needs of the job and of the person on the job independently. The second instrument, then, asked the subjects to rank order the ten items in terms of their frequency importance to the job. The third instrument asked the subjects to rank order the ten items in terms of their own personal need frequency. The fourth instrument measures the subjects perception of communication problems in the organization utilizing the ten items referred to above. Numerous efforts by

researchers have been made to identify how individuals in organizations, particularly business organizations, perceive the nature of communicaton problems within their organizations. The fourth instrument asked the subjects to rank order the ten items in terms of how they view them as a concern to employee communication on the job.

The fifth instrument is a measure of how important the subjects consider a set of rather specific communication competency behaviors to be to employees in management positions. The instrument is composed of thirty items which are drawn from a line of research which has a substantial history (Tuttle, 1983; Di Salvo, 1976; Spicer, 1975).Subjects were asked to rate each item on a scale from one to nine where one is "absolutely not essential" and nine is "absolutely essential". The thirty items measure rather specific performance competency needs. The thirty items of this instrument are available in Appendix 1.

The sixth instrument is a measure of the perception of the reason for communicating in the job situation. The instrument contains ten communication strategic activity categories. Subjects were asked to rank order the ten items in terms of importance in terms of job related need. The ten items of this instrument are available in Appendix 1.

The seventh instrument is a measure of the perception of the frequency with which subjects need to change their communication functions and roles in the organizational environment; thus, a measure of how important they feel the changing of functions and roles is to success of the organization. The specific questions relating to role and function change are available in Appendix 1.

The eighth instrument is a Q deck containing sixty items drawn from the communication research literature (Krivonos, 1978; Lewis, Cummings, Long, 1982; Spiker, 1981). Twenty items were drawn from the literature representing mode, functions, direction, roles of communication behaviors consistent with guidelines described by Cragan and Shields (1981). The deck was constructed with the twenty items stated in a way to represent three visions of normative manager communication behavior: always, occasionally, and never. Subjects were directed to sort the deck into nine categories. Each individual's sorted deck of the sixty items was factor analyzed to allow for comparison of the factor structures according to the four paradigms of this study. Items used in the deck are listed in Appendix 1.

All of the eight instruments contained items which were explicitely stated as listening. One instrument contained some specific behaviors which are implicitely listening behaviors.

RESULTS

Instrument One

The data obtained from the first instrument revealed a mean of the percentage of time devoted to each of the five modes of communication (Table 1.1). Analysis of the data was by oneway analysis of variance of the mean frequency of communication mode by country (Table 1.2), organizational type (Table 1.3), cognitive complexity (Table 1.4), and specific organization (Table 1.5). For Table 1.2. through 1.5 see Appendix 2.

There were no significant differences in mean percentages for any of the five modes of communication using analysis by the nationality paradigm or using the

personality paradigm. There were significant differences in mean percentages for the communication modes of writing ($F = 7.865$; $p < .01$) and listening ($F = 7.440$; $p < .01$) using analysis by the cultural paradigm. There were also significant differences in mean percentages of the communication modes of writing ($F = 2.841$; $p < .05$) and listening ($F = 3.027$; $p < .01$) using the situational paradigm.

TABLE 1.1
PERCENT OF TIME USING COMMUNICATION MODE

WRITING	17
SPEAKING	31
LISTENING	31
READING	14
COMPUTING	7

Instrument Two (Job Needed Communication Function)

The data obtained from the second instrument were analyzed by oneway analysis of variance test of the ranking for each of the ten job needed communication function items by country (Table 2.1), organizational type (Table 2.2), cognitive complexity (Table 2.3), and specific organiation (Table 2.4). All tables are available in Appendix 2. Items are available in Appendix 1.

There were no significant differences in mean scores for rank ordering frequency of any of the ten job needed communication functions using the analysis by the nationality paradigm or the personality paradigm. There were significant differences in mean scores for rank ordering frequency of job needed communication functions "listening within" ($F = 4.01$; $p < .05$) and "speaking to groups outside" ($F = 5.83$; $p < .05$) using analysis by the cultural paradigm. There were also significant differences in mean scores for rank ordering frequency of job needed communication functions "speaking to groups within" ($F = 4.87$; $p < .05$) and "writing to the outside" ($F = 3.09$; $p < .05$) using analysis by the situational paradigm.

Instrument Three (Own Needed Communication Functions)

The data obtained from the third instrument were analyzed by oneway analysis of variance test of the ranking for each of the ten items by country (Table 3.1), organizational type (Table 3.2), cognitive complexity (Table 3.3), and specific organization (Table 3.4).

There were no significant differences in mean scores for rank ordering frequency of any of the ten own needed communication functions using the analysis by the personality paradigm or the cultural paradigm. There was a signficant difference in mean score for rank ordering frequency of own needed communication function "reading outside material" ($F = 5.55$; $p < .05$) using analysis by the nationality paradgm. There was also a significant differences in mean score for rank ordering frequency of own needed communication functions "reading material from within" ($F = 8.07$; $p < .01$) and "speaking to groups outside" ($F = 4.24$; $p < .05$) using analysis from the situational paradigm.

Instrument Four (Employees Own Concern)

The data obtained from the fourth instrument were analyzed by oneway analysis

of variance test of the ranking for each of the ten items by country (Table 4.1), organizational type (Table 4.2), cognitive complexity (Table 4.3), and specific organization (Table 4.4).

There were no significant differences in mean scores for rank ordering frequency of any of the ten employee concerns about their own actual communication functions using the analysis by the nationality, personality, or situational paradigms. There was a significant difference in mean score for rank ordering concern of own actual communication function "speaking to outside groups" ($F = 5.22$; $p < .05$) using analysis by the cultural paradigm.

Instrument Five (Importance of Specific Communication Behaviors)

The data obtained from the fifth instrument were analyzed by comparing the rank ordering of the thirty items by country, organizational type, cognitive complexity, specific organization. Correlations of the rank ordering means were tested for significance. A matrix of item means by country, organizational type, and cognitive complexty is presented in Table 5.1 along with a correlation matrix in Table 5.2 in Appendix 2. There were virtually identical high correlations between the three paradigms in the rank ordering of the thirty communication behaviors (U.S.: Australia=.88; Service : I/C= .84; High : Low Cognitive Complexity= .85). Thus none of the instruments seemed to have any unique quality for locating different perceptions of communication behavior.

The ten items which consistently ranked in the top ten in importance by all paradgms included the following:

1. Ask for and give information.
2. Solicit feedback from those with whom one communicates.
3. Deal constructively with conflict situations that arise.
4. Communicate downward within the organization.
5. Avoid semantic break downs.
6. When controvery arises work toward alternatives.
7. Display willingness to grow psychologically.
8. Communicate laterally.
9. Understand concepts of networks and recognize potential problem areas.
10. Identify concepts and supporting arguments of others.

Items 1, 2, 5, 9, and 10 are really listening behavior categories.

Instrument Six (Amount of Time on Job Need Communication Activity)

The data obtained from the sixth istrument were analyzed by oneway analysis of variance test of the mean ranking of each of the ten items by country (Table 6.1), organizational type (Table 6.2), cognitive complexity (Table 6.3), and specific organization (Table 6.4). All tables are available in Appendix 2.

There were no signifcant differences in mean scores for rank ordering the amount of time spent on job communication function items using the analysis by the nationality and the cultural paradigms. There were significant differences in mean scores using the personality and the situational paradigms. Using the personality paradigm, there was a significant difference on the function "reading within the organization" ($F = 9.30$; $p < .01$). Using the situational paradigm, there was a significant

difference on the function "speaking to groups within the organization" ($F = 3.73$; $p < .05$).

Instrument Seven (Perceived Need to Change Functions and Roles)

The data obtained from the seventh instrument were analyzed by oneway analysis of variance test of the mean rating of attitude toward changing function of four different aspects of function change and four different attitudes of role change by country (Table 7.1), organizational type (Table 7.2), cognitive complexity (Table 7.3), and specific organization (Table 7.4). All tables are available in Appendix 2.

There were no significant differences in mean rating of attitude toward changing function using the paradigms of nationality, culture, personality, or situation. There were no significant differences in mean rating of attitude toward changing aspects of role using the paradigms of culture, and personality. There were signifcant differences in mean rating of attitude toward changing aspects of role when using the paradigms of nationality and situation.

Instrument Eight (Specific Communication Behaviors)

The data obtained from the eighth instrument were analyzed by factor analysis method. The factor structures were obtained for each of the paradigmatic constructs: nationality (Table 8.1), culture, (Table 8.2), personality (Table 8.3). All tables are available in Appendix 2.

Comparison of the four sets of factor structures according to the three constructs reveals a lack of any fundamental differences in the composition of items in each of the comparisons. The composition of each factor lacks any generalizabe characteristics. The factor structure composition of the overall data failed to show any resembelence to the three underlying visions used to generate the original deck of sixty items: always, occasionally, never. Thus, the results of the factor analysis provide little support for any of the models for theory building.

DISCUSSION

The first question was essentially which paradigm would be most useful for finding differences in communication behavior or perceptions of behavior by management in organizational environments. From the preceeding results and the table in the appendix it is possible to summarize the findings in such a way that the utilty of the four models can be compared (Table 9.1).

TABLE 9.1
PARADIGM CONSISTENCY IN LOCATION OF COMMUNICATION COMPETENCE DIFFERENCES ACROSS SUBJECTS BY PARADIGM

NUMBER OF SIGNIFICANT DIFFERENCES FOUND

	Nationality	Type organization	Cognitive complexity	Specific organization	# Items
Instrument					
1.	0	2	0	2	05
2.	0	2	0	2	10
3.	1	0	0	2	10
4.	1	1	0	2	10
5.	2	1	3	7	30
6.	0	0	1	1	10
7.	3	0	0	2	08
Total	7	6	4	18	83

Thus, it appears that a situational paradigm would generate far more significant differences in item means on a variety of instruments drawn from diverse kinds of research in the discipline. This would suggest that the situational research approach would be more useful. However, the summary (Table 9.1) indicates that some differences were found using each paradigm. Thus, each method probably has some utility for analysis of theory building data.

The second research question focused on the relative needs people have for the various kinds of communication. The data reported in Table 1.1 supports the long held view that speaking and listening are the two predominant modes of communicatin. This research demonstrated that to be the case for mid level managers in different kinds of organizations in the United States and Australia. It should be noted that the 31% of time spent listening by organizational managers might be interpreted as quite low compared to the common perception of about 45% of time spent listening. In fact, the 45% is usually for the general population as a whole including children viewing—"listening"—television for hours. In addition, all other research has failed to consider computing as a mode. Thus, the distribution of time will be different in a five category instrument than in a four category instrument. During in depth interviews with all twenty eight subjects after they completed the booklet of research instruments, it was a virtually unanimous event listening was identified as the most important communication they do and the communication mode which creates the most serious problems for the organization. That conclusion is not new nor profound. But, it has not been identified so explicitely from midlevel organizational managers by both objective survey and by indepth interview methods with the same subjects.

Perhaps more importantly, the instruments which measured perceptions of importance of specific categories of behavior and/or specific behaviors reveal that listening as part of an interaction or transactional situation is deemed most important in the organizational environment. The data reported in Table 5.1 provided a list of ten most important communication behavior categories. As pointed out in the results of data collected with instrument five, five of the ten items are listening behavior categories. The first, "ask for and give information," is clearly listening in an interactive exchange. That is the item which was deemed most important. The second

behavior category, "solicit feedback from those with whom one communicates," appears to be unidirectional; but, it can not really exist alone in isolation. One must give something in order to ask for feedback about what has been given. Clearly, this second most important item is also interactive in nature. The third item, "avoids semantic breakdowns," begs the question of how one goes about avoiding semantic breakdowns. Most scholars would agree that several actions are often needed to avoid breakdowns. Some of those actions are: holding judgements in abayance, exchange information, meta communicating about words and examples. Clearly, behaviors like the last are interactive in nature. The fourth item in the top ten, "understand concepts of networks and recognize potential problems," is a mental behavior required to make communication successful. That probably is not interactive listening in the same sense as the first three items above. The same may be said for the fifth item in the top ten, "identify concepts and supporting arguments of others." The last two may, however, be viewed as active mental interactive behaviors. Therefore, in one sense or another, all five of the items in the top ten items of behaviors needed to be successful as a manager in an organization are interatctive in nature.

From data collected with several instruments reported in this research, it is apparent that two broad listening roles are important for managers in organizations. The total subject mean scores of the ten functions listed in tables 2.1-2.4, 3.1-3.4, 4.1-4.4 will show that listening within the organization and listening outside the organization will nearly always be in the top three items. In most cases, listening within the organization will be first. In most cases, listening outside the organization and speaking outside the organization will have the second and third highest mean scores.

The factor analysis of data from sorting the Q deck did not reveal any factor structures useful to generalizing about communication research paradigms. However, the sorting done by the twenty-eight subjects did produce mean scores for the sixty items. Some of the highest mean scores were for listening behaviors. An examination of the items which had high means may be useful for gaining a better knowledge about successful listening behavior in organizations.

Five items of specific communication behavior in the sixty item Q deck were among the ten items with the highest means. The items were:

19. A competent employee is one who will, during a conversation always restate/repeat information they are told.

20. A competent employee is one who will always ask questions.

2. A competent employee is one who always apeak to his/her fellow employees about a perceived problem (such as listening problems in the organization.

3. A competent employee is one who, when in a work group, will always make it his/her responsibility to play a listening role.

23. A competent employee is one who, when in a group, will occasionally make it a point to be responsible for playing a listening role.

Most of the five items are clearly interactive in nature.

Therefore, the following observations about listening behavior needed by managers in organization can be made from this research. Listening is the most imporant communication mode. Listening internally is perceived as slightly more important than listening externally and than speaking which are the next two most important functions. Listening behaviors which are deemed most important are interactive in nature. Some of the most important behaviors across independent variables are:

The third research question was to find the relationship between general attitudes of pro change and perceptions of listening behavior. By correlating the eight items of instrument five with the thirty items of instrument four, it is possible to construct a view of the communication behaviors of a pro change person. The highest correlation was behavior category 26 "asks for and gives information" with correlations exceeding .50. The second highest correlations were with category 29, "when controvery arises work toward alternative solutions. Category 26 is clearly a high listening item as is item 29. Both categories are interactive communication behavior. The category which had the highest negative correlations with change items as category 1, "understnd that we never have complete control over how our messages may be received." One who does not understand that principle, is failing to undertand the listening process of receivers.

The implication from some of the more important correlates is that pro change people must be good listeners themselves and they must understand listening sufficiet well to take into account the listening of the receivers of their own messages. Therefore the analysis of the data to answer the third research question suports the analysis to previous questions that the interactive model for viewing listening should be the most important perspective for understanding success of managers in business.

Three research questions were raised in this paper. The data collected and analyzed, although limited in terms of total number of subjects, does contribute some interesting insight into understanding a useful approach to further research into organizational communication and into the nature of listening as an integrated communication mode. The research reported here suggests that listening should be studied as a mode interactive with speaking and that research probably should be more situation specific.

APPENDIX 1

COMMUNICATION FUNCTIONS

ONE: Reading communication from persons within the organization.
TWO: Writing to persons within the organization.
THREE: Listening within the organization.
FOUR: Speaking to individuals within the organization.
FIVE: Speaking to groups within the organization.
SIX: Speaking to groups outside the organization.
SEVEN: Speaking to individuals outside the organization.
EIGHT: Listening to persons outside the organization.
NINE: Writing to persons outside the organization.
TEN: Reading communication from persons outside the organization.

COMMUNICATION BEHAVIORAL ACTS

1. Understanding that we never have complete control over how our messages may be interpreted.
2. Focus attention on those organizational symbols which will direct the creative energies of the organization to the desired end.
3. Identify concepts and supporting arguments of others.
4. Deal constructively with conflict sistuations that arise within the organization.
5. Demonstrate a basic understanding of economics.
6. Recognize that the nature of the relationship between persons is a product of the interaction between them rather than of the traits of behavior of any person individually.
7. Communicate laterally within the organization.
8. Play a deviant role constructively.
9. Demonstrate awareness of the many social and cultural factors which affect communication.
10. Communicate upward within the organization.
11. Maintain parliamentary order during meetings.
12. Discriminate among various managerial and leadership styles.
13. Communicate downward within an organization.
14. Serve an internship in an organization.
15. Understand the concepts of communication networks and recognize potential problem areas.
16. Solicit feedback from those with whom one communicates.
17. Do independent research.
18. Understand the determinants of productivity.
19. Recognize the effects of power and status differences on communication behavior.
20. Demonstrate flexibility in dialects and language patterns.
21. Restate statements made by others to reflect their meaning accurately.
22. Recognize the tendency of subordinates not to express their negative reactions or problems.
23. Direct small groups in using computer yielded data in solving complex problems.
24. Tolerate considerable ambiguity in response to messages.
25. Recognize both the social and task oriented needs of groups.
26. Ask for and give information.
27. Avoid semantic breakdowns of communication.
28. Recognize that meanings are in people.
29. When controversy arises work toward alternate solutions.
30. Display a willingness to grow psychologically on the job.

COMMUNICATION ROLE CHANGE STATEMENTS

I must change my role function many times each day.
I feel comfortable engaging in role function change.
I feel comfortable being in the different roles.
I feel that employee role function change makes a positive contribution to the goals of my organization.

I must change my role behavior many times each day.
I feel comfortable engaging in role behavior change.
I feel comfortable engaging in the different role behavior.
I feel that employee change makes a positive contribution to the goals of my organization.

Q DECK ITEMS

1.
A competent employee is one who will always write a memo to the appropriate person or persons whenever they become aware of a problem (such as need for everyone to have a flexible work schedule).

21.
A competent employee is one who will occasionally write a memo to the appropriate person or persons whenever they become aware of a problem (such as need for everyone to have a flexible work schedule).

41.
A competent employee is one who will mind their own business whenever there is a problem (such) as a need for everyone to have a flexible work schedule) and leave the matter to an appropriate person in the organization.

2.
A competent employee is one who will always speak to his/her fellow employees about a perceived problem (such as listening problems in the organization.

22.
A compotent emplyee is one who will occasionally make it a point to speak to fellow employees about a perceived problem (such as listening problems in the organization).

42.
A competent employee one who will mind their own business whenever there is a problem (such as listening problems in the organization) and leave the matter to an appropriate person in the organization.

3.
A competent employee is one who when in a work group will always make it his/her responsibility to play a listening roler.

23.
A competent employee is one who in a work group will occasionally make it a point to be responsible for playing a listening role.

43.
A competent employee is one who in a work group will never let themself play just a listening role.

4.
A compotent employee is one who perceives a need to develop a complex solution to a problem and will always look for an answer in the organiz-

24.
A compotent empolyee is one who perceives a need to develop a complex solution to a problem and will occasionally turn to the organization handbook for information about the

44.
A compotent employee is one who perceives a need to develop a complex solution to a problem but will read the organization handbook for information

ation handbook for information about the problem.

problem.

only if he/she is directed to do so.

5.
A competent employee is one who will always try first to interact with other persons via computer to find an answer to a question (such as how to construct a message appropriate for an external public).

25.
A competent employee is one who will occasionally try first to interact with other persons via computer to find an answer to a question (such as how to construct a message appropriate for an external public).

45.
A competent employee is one who will never, unless directed, interact with other persons via computer to find an answer to a question (such as how to construct a message appropriate for for an external public).

6.
A competent employee is one who considers it his/her role to initiate many requests for information and to respond to requests from both within and without the organiz.

26.
A competent employee is one who considers it his/her role to occasionally initiate requests for information and to respond to requests from both within and without the organization.

46.
A competent employee is one who considers it his/her role to - for and give information only when when specifically asked or directed.

7.
A competent employee is one who is always ready to offer suggestions for solutions to problems whenever a work group meets.

27.
A competent employee is one who is occasionally willing to offer suggestions for solving problems whenever a work group meets.

47.
A competent employee is one who minds their own business in work groups and lets other people offer solutions to problems.

8.
A competent employee is one who will always try to negotiate an interpersonal difference between two fellow employees.

28.
A competent employee is one who will occasionally help negotiate an interpersonal difference between two fellow employees.

48.
A competent employee is one who minds their own business and doesn't attempt to negotiate an interpersonal difference between fellow employees.

9.
A competent employee is one who will always try to motivate fellow employees by such means as encouragement, recognition, praise.

29.
A competent employee is one who will occasionally make an effort to motivate fellow employees by such means as encouragement, recognition, praise.

49.
A competent employee is one who will mind their own business, do their own work, and let someone else take care of motivating people.

10.
A competent employee is one who will always take it upon themself to help

30.
A competent employee is one who will occasionally be willing to take the initiative and help

50.
A competent employee is one who will mind their own business and never

a new employee by explaining the organization's ritual (such as customary use of titles and rank).	a new employee by explaining the organization's ritual (such as customary use of titles and rank).	take it upon themself to help a new employee by explaining the organization's ritual (such as customary use of titles and rank).
11. A competent employee is one who always prefers to be in a role as speaker or writer of information persons outside the organization (such as explaining how something works).	31. A competent employee is one who will occasionally be in a role as speaker or writer of information to persons outside the organization (such as explaining how something works).	51. A competent employee is one who will never be in a role as speaker or writer of information to persons outside the organization (such as explaining how something works).
12. A competent employee is one who will always prefer to be in a role as reader or listener to what persons outside the organization have to say to this organization (such as customers, clients, public).	32. A competent employee is one who will occasionally be in a role as reader or listener to what persons outside the organization have to say to this organization (such as customers, clients, public).	52. A competent employeeis one who will never spend his/her time reading or listening to what persons outside the organization have to say to this organization (such as customers, clients, publics).
13. A competent employee one who will always look for an opportunity in a work group to keep the discussion in the group related to the task at hand.	33. A competent employee is one who will occasionally look for an opportunity in a work group to keep the discussion in the group related to the task at hand.	53. A competent employee is one who will never look for an opportunity in a work group to keep the discussion in the group related to the task at hand.
14. A competent employee is one who will always look for an opportunity in a work group to see that the group deals with socio-emotional needs of members of the group.	34. A competent employee is one who will occasionally look for opportunity in a work group to see that the group deals with socio-emotional needs of members of the group.	54. A competent employee is one who will ignore socio-emotional needs of fellow members of a work group and let someone else worry about that problem.
15. A competent employee is one who will always prefer to speak to a large group of people rather than on a one to one regardless of the situation.	35. A competent employee is one who will occasionally prefer to speak to a large group of people rather than on a one to one basis irregardless of the situation.	55. A competent employe is one who will never want to speak to a large of people.

16.
A competent employee is one who will always speak fer to speak one to one with people rather than to a large group irregardless of the situation.

36.
A competent employee is one who will occasionally prefer to speak one to one with people rather than to a large group irregardless of the situation.

56.
A competent employee is who will never want to to speak on a one to one basis to people about anything substantial.

17.
A competent employee is one who will always give feedback to someone he/she is talking with.

37.
A competent employee is one who will often give and reveive feedback with someone he/she is talking with.

57.
A competent employee is one who will liste to someone and not provide feedback.

18.
A competent employee is one who will always initiate a communication wherever they meet a person within or ourtside the organization.

38.
A competent employee is one who will occasionally initiate a communication whereever they meet a person within or outside the organization.

58.
A competent employee is one who will never initiate a communication wihin or outside the organization but will always let others initiate the communication

19.
A competent employee is one who will during a conversation always restate/repeat information they are told.

39.
A competent employee is one who will during a conversation occasionally restate/repeat information they are told.

59.
A competent employee one who will during a conversation never restate/repeat information they are told.

20.
A competent employee is one who will always ask questions.

40.
A competent employee is one who will occasionally ask questions.

60.
A competent employeeis who will never ask questions.

APPENDIX 2

TABLE 1.1
PERCENT OF TIME USING COMMUNICATION MODE

WRITING	17
SPEAKING	31
LISTENING	31
READING	14
COMPUTING	7

TABLE 1.2
MEAN FREQUENCY PERCENTAGE OF COMMUNICATION MODE
BY COUNTRY (PARADIGM:NATIONALITY)

MODE	TOTAL MEAN	U.S. MEAN	AUSTRALIA MEAN	F
WRITING	17.86	16.79	18.93	.480
SPEAKING	31.79	32.86	30.71	.312
LISTENING	31.25	27.36	32.14	1.517
READING	14.32	14.86	13.79	.175
COMPUTING	7.00	8.14	5.86	.558

* Significant $p < .01$
There were no significant differences in mean scores on the variable of nationality for any of the five modes of communication

TABLE 1.3
MEAN FREQUENCY PERCENTAGE OF COMMUNICATION MODE
BY ORGANIZATIONAL TYPE (PARADIGM: CULTURAL)

MODE	TOTAL MEAN	SERVICE MEAN	I/C MEAN	F
WRITING	17.86	23.00	15.00	7.865*
SPEAKING	31.79	36.00	29.44	2.950
LISTENING	31.25	23.33	33.33	7.440*
READING	14.32	14.30	14.33	0.000
COMPUTING	7.00	5.40	7.89	.609

Note: I/C represents Industrial/Commercial.

* Significant $p < .01$
Significant differences according to organizational type did exist in two of the five communication mode categories.

TABLE 1.4
MEAN FREQUENCY PERCENTAGE OF COMMUNICATION MODE
BY COGNITIVE COMPLEXITY (PARADIGN: PERSONALITY)

MODE	TOTAL MEAN	HIGH C.C. MEAN	LOW C.C. MEAN	F
WRITING	17.86	17.14	18.57	.211
SPEAKING	31.79	31.07	32.50	.137
LISTENING	31.25	29.86	29.64	.003
READING	14.32	15.43	13.21	.765
COMPUTING	7.00	7.93	6.07	.365

* Significant p < .01
There were no significant differences in mean scores on the measure of personality for any of the five categories of communication.

TABLE 1.5
MEAN FREQUENCY PERCENTAGE OF COMMUNICATION MODE
BY SPECIFIC ORGANIZATION

MODE	#1 MEAN	#2 MEAN	#3 MEAN	#4 MEAN	#5 MEAN	#6 MEAN	F
WRITING	13.3.	23.9	12.5	22.8	18.3	23.0	2.841*
SPEAKING	29.4	33.0	25.0	25.0	25.0	38.3	1.665
LISTENING	32.8	28.8	38.8	35.5	26.7	17.6	3.027*
READING	15.3	14.6	12.5	17.5	11.7	14.0	.287
COMPUTING	9.1	4.4	13.3	00.0	5.0	6.4	.587

* Significant p < .01
Significant differences according to specific organization did exist in two of the five communication mode categories.

TABLE 2.1
MEAN RANKING OF JOB NEEDED COMMUNICATION
BY COUNTRY (PARADIGM:NATIONALITY)

COMMUNICATION ITEM	TOTAL MEAN	U.S MEAN	AUSTRALIA MEAN	F
1.Read within	5.42	5.93	4.93	1.380
2.Write within	5.14	5.15	5.21	0.003
3.Listen within	6.64	7.29	6.00	1.375
4.Speak/indiv/with	6.79	7.71	5.86	2.428
5.Speak/group/with	5.21	5.07	5.36	0.070
6.Speak/group/outs	4.71	4.14	5.29	0.694
7.Speak/indiv/outs	6.04	6.14	5.93	0.048
8.Listen outside	6.00	5.86	6.14	0.120
9.Write outside	4.50	3.57	5.14	1.911
10.Read outside	4.36	3.57	5.14	3.535

* Significant p < .05
There were no significant differences in mean scores on the ranking of nationality for any of the ten communication functions.

TABLE 2.2
MEAN RANKING OF JOB NEEDED COMMUNICATION
BY ORGANIZATIONAL TYPE (PARADIGM: CULTURAL)

COMMUNICATION ITEM	TOTAL MEAN	SERVICE MEAN	I/C MEAN	F
1.	5.43	5.60	5.33	0.062
2.	5.14	4.40	5.56	2.412
3.	6.64	5.30	7.39	4.012*
4.	6.79	5.90	7.28	1.039
5.	5.21	4.20	5.78	2.805
6.	4.71	6.20	3.89	5.853*
7.	6.04	7.10	5.45	3.664
8.	6.00	6.40	5.78	1.301
9.	4.36	3.90	4.61	1.345

* Significant $p < .05$
here were significant differences in the mean scores of rank ordering time spent in communication function items three and six from the organizational type paradigm.

TABLE 2.3
MEAN RANKING OF JOB NEEDED COMMUNICATION
BY COGNITIVE COMPLEXITY (PARADIGM: PERSONALITY)

COMMUNICATION ITEMS	TOTAL MEAN	HIGH C.C. MEAN	LOW C.C MEAN	F
1.	5.43	5.29	5.57	0.107
2.	5.14	4.93	5.36	0.156
3.	6.64	7.64	5.64	3.596
4.	6.79	7.36	6.21	0.869
5.	5.21	4.93	5.50	0.284
6.	4.71	4.21	5.21	0.528
7.	6.04	6.36	5.71	0.437
8.	6.00	6.14	5.86	0.120
9.	4.50	4.00	5.00	1.123
10.	4.36	4.14	4.57	0.233

* Significant p .05
There were no significant differences in mean scores by cognitive complexity for any of the ten communication function items.

TABLE 2.4
MEAN RANKING OF JOB NEEDED COMMUNICATION
BY SPECIFIC ORGANIZATION

COMMUNICATION ITEM	#1 MEAN	#2 MEAN	#3 MEAN	#4 MEAN	#5 MEAN	#6 MEAN	F
1.	6.22	5.80	4.25	2.00	4.67	5.40	0.958
2.	6.56	6.40	4.00	3.00	4.33	2.40	2.505
3.	8.33	5.20	8.25	4.00	5.33	5.40	1.723
4.	8.67	5.80	8.00	5.00	4.00	6.00	1.488
5.	6.78	6.40	4.25	1.00	5.00	2.00	4.87**
6.	2.56	5.40	3.75	8.00	7.00	7.00	1.701
7.	4.89	5.80	6.25	9.00	6.00	8.40	1.855
8.	5.33	6.00	7.00	10.00	5.67	6.80	1.564
9.	2.44	4.60	4.25	7.00	5.67	6.40	3.091*
10.	3.22	3.60	5.00	6.00	7.33	4.20	1.982

* Significant $p < .05$
There were significant differences in the mean scores of rank ordering communicatin function items five and nine from the specific organization analysis.

TABLE 3.1
MEAN RANKING OF OWN NEEDED COMMUNICATION
BY COUNTRY (PARADIGM: NATIONALITY)

COMMUNICATION ITEM	TOTAL MEAN	U.S. MEAN	AUSTRALIAN MEAN	F
1.	5.64	6.43	4.86	3.140
2.	4.93	5.21	4.64	0.310
3.	6.57	7.36	5.79	2.230
4.	6.89	7.71	6.07	1.780
5.	4.96	4.64	5.29	0.422
6.	4.25	4.07	4.23	0.090
7.	6.29	6.29	6.29	0.000
8.	5.61	4.93	6.29	2.331
9.	4.86	4.14	5.57	1.680
10.	4.82	3.86	5.79	5.545*

* Significant $p < .05$
There was a significant difference in mean scores of rank ordering communication function ten from analysis with the nationality paradigm.

TABLE 3.2
MEAN RANKING OF OWN NEEDED COMMUNICATION
BY ORGANIZATIONAL TYPE (PARADIGM: CULTURAL)

COMMUNICATION ITEM	TOTAL MEAN	SERVICE MEAN	I/C MEAN	F
1.	5.64	5.60	5.33	0.086
2.	4.93	4.40	5.56	1.079
3.	6.57	5.30	7.39	3.604
4.	6.89	5.90	7.28	1.173
5.	4.96	4.20	5.78	2.115
6.	4.25	6.20	3.89	2.813
7.	6.29	7.10	5.44	2.912
8.	5.61	6.40	5.78	0.533
9.	4.86	5.50	3.94	2.636
10.	4.82	3.90	4.61	0.599

* Significant $p < .05$
There were no significant differences in mean scores of rank ordering communication function items by the organizational cultural paradigm.

TABLE 3.3
MEAN RANKING OF OWN NEEDED COMMUNICATION
BY COGNITIVE COMPLEXITY (PARADIGM: PERSONALITY)

COMMUNICATION ITEM	TOTAL MEAN	HIGH C.C. MEAN	LOW C.C. MEAN	F
1.	5.64	5.50	5.78	0.34
2.	4.93	4.87	5.00	0.64
3.	6.57	5.86	7.29	2.76
4.	6.89	6.43	7.35	1.47
5.	4.96	5.57	4.36	2.80
6.	4.25	4.71	3.93	0.41
7.	6.29	5.93	6.64	0.53
8.	5.61	5.86	5.36	0.62
9.	4.86	5.29	4.93	1.54
10.	4.82	4.79	4.86	0.09

* Significant $p < .05$
There were no significant differences in mean scores of rank ordering communication function items from the analysis using the personality paradigm.

TABLE 3.4
MEAN RANKING OF OWN NEEDED COMMUNICATION
BY SPECIFIC ORGANIZATION

COMMUNICATION ITEMS	#1 MEAN	#2 MEAN	#3 MEAN	#4 MEAN	#5 MEAN	#6 MEAN	F
1.	7.33	3.40	5.25	1.00	2.33	5.41	8.07**
2.	7.66	3.80	5.50	7.00	6.00	4.00	2.39
3.	8.33	5.40	5.00	8.00	4.00	5.80	1.41
4.	6.00	5.00	4.50	9.00	1.67	7.00	1.68
5.	4.89	6.00	4.75	6.00	3.33	7.20	1.20
6.	3.11	6.22	7.00	4.00	10.00	7.00	4.24*
7.	4.22	5.20	4.75	5.00	6.33	6.60	0.63
8.	4.78	7.00	4.75	10.00	7.00	5.20	1.25
9.	4.50	6.60	7.25	3.00	8.00	3.00	2.03
10.	4.11	6.40	6.25	2.00	6.33	2.80	2.18

* Signficant $p < .05$
There were significant differences in the mean scores of rank ordering communiation function items one and six when analyzed by specific organization.

TABLE 4.1

MEAN RANKING OF EMPLOYEE COMMUNICATION CONCERN
BY COUNTRY (PARADIGM: NATIONALITY)

COMMUNICATION ITEM	TOTAL MEAN	U.S MEAN	AUSTRALIA MEAN	F
1.	4.29	5.29	3.57	3.62
2.	5.89	6.50	5.29	1.76
3.	6.69	7.50	6.43	1.33
4.	5.25	5.64	4.86	0.76
5.	6.21	6.00	6.43	0.09
6.	5.89	4.71	7.07	5.89*
7.	5.18	5.43	4.93	0.07
8.	5.43	5.43	5.43	0.03
9.	5.50	4.50	6.50	3.87
10.	4.07	3.64	4.50	1.20

* Significant $p < .05$
There was a significant difference in rank ordering communication concern on iem six using analysis by the nationality paradigm.

TABLE 4.2
MEAN RANKING OF EMPLOYEE COMMUNICATION CONCERN
BY ORGANIZATIONAL TYPE (PARADIGM: CULTURAL)

COMMUNICATION ITEM	TOTAL MEAN	SERVICE MEAN	I/C MEAN	F
1.	4.29	3.30	5.06	3.66
2.	5.89	4.90	6.44	2.86
3.	6.96	6.00	7.50	1.48
4.	5.25	4.50	5.67	0.82
5.	6.21	5.70	6.50	0.90
6.	5.89	7.30	5.11	5.22*
7.	5.18	6.30	4.56	2.81
8.	5.43	6.20	5.00	1.10
9.	5.50	6.30	5.06	1.24
10.	4.07	4.00	4.11	0.01

* Significant $p < .05$
There was a significant difference in rank ordering communication concern on item six using analysis by the organizational cultural paradigm.

TABLE 4.3
MEAN RANKING OF EMPLOYEE COMMUNICATION CONCERN
BY COGNITIVE COMPLEXITY (PARADIGM: PERSONALITY)

COMMUNICATION ITEM	TOTAL MEAN	HIGH C.C. MEAN	LOW C.C. MEAN	F
1.	4.29	4.64	4.21	0.04
2.	5.89	6.29	5.50	0.50
3.	6.69	6.00	7.93	3.17
4.	5.25	4.29	6.21	2.80
5.	6.21	5.57	6.86	2.34
6.	5.89	5.36	6.43	0.65
7.	5.18	6.00	4.36	2.54
8.	5.43	6.07	4.79	1.41
9.	5.50	5.79	5.21	0.66
10.	4.07	4.64	3.50	1.83

* Significant $p < .05$
There were no significant differences in rank ordering communication concerns using analysis by the personality paradigm.

TABLE 4.4
MEAN RANKING OF EMPLOYEE COMMUNICATION CONCERN
BY SPECIFIC ORGANIZATION

COMMUNICATION ITEM	#1 MEAN	#2 MEAN	#3 MEAN	#4 MEAN	#5 MEAN	#6 MEAN	F
1.	6.11	2.80	4.50	1.00	3.00	3.80	0.49
2.	7.56	5.20	3.25	10.00	5.33	4.60	4.97**
3.	8.00	5.40	7.75	9.00	6.67	6.60	0.49
4.	6.56	5.00	5.25	3.00	4.33	4.00	0.41
5.	6.22	5.80	7.50	2.00	6.33	5.60	0.41
6.	3.22	7.20	7.50	4.00	7.67	7.40	3.78*
7.	4.89	6.20	3.75	5.00	4.67	6.40	0.57
8.	4.67	5.60	5.25	8.00	6.00	6.80	0.41
9.	4.00	7.20	5.00	7.00	7.00	5.40	1.15
10.	3.79	4.60	5.00	6.00	4.00	3.40	0.24

* Significant $p < .05$; **Significant $p < .01$.

TABLE 5.1
MEANS FOR RANK ORDERING THIRTY COMMUNICATION BEHAVIORS
BY COUNTRY, ORGANIZATIONAL TYPE, AND COGNITIVE COMPLEXITY

ITEM	U.S.	AUST.	SERVICE	I/C	HIGH C.C.	LOW C.C.
1.	6.29	7.14	5.90	7.17	7.00	6.43
2.	6.29	6.43	7.10	5.94	6.86	5.86
3.	6.57	7.36	6.60	7.17	6.64	7.29
4.	7.57	8.36	7.80	8.06	7.79	8.14
5.	5.79	4.93	5.90	5.06	5.43	5.29
6.	5.50	6.36	6.20	5.78	5.29	6.57
7.	6.86	7.50	6.80	7.39	7.00	7.36
8.	4.50	4.00	2.80	5.06	4.07	4.43
9.	5.57	6.57	6.80	5.67	5.71	6.43
10.	7.50	7.71	7.20	7.83	7.29	7.93
11.	3.64	5.36	4.90	4.28	4.43	4.57
12.	5.14	5.50	5.60	5.17	5.21	5.43
13.	7.57	7.86	6.90	8.17	7.14	8.29
14.	4.23	4.64	5.00	4.28	4.86	4.21
15.	6.43	7.21	7.00	6.72	6.36	7.29
16.	7.86	8.29	8.10	8.06	7.64	8.50
17.	4.79	4.93	5.40	4.46	4.50	5.21
18.	6.93	6.14	6.70	6.44	6.50	6.57
19.	6.21	6.86	6.10	6.78	6.00	7.07
20.	3.43	5.29	5.10	3.94	3.86	4.86
21.	6.14	6.86	7.00	6.22	5.93	7.07
22.	6.64	6.93	6.40	7.00	6.50	7.07
23.	3.07	4.57	4.20	3.61	4.00	3.64
24.	4.07	3.43	3.80	3.72	3.79	3.71
25.	6.36	6.57	6.60	6.39	6.29	6.64
26.	8.43	8.29	8.40	8.33	8.29	8.43
27.	7.29	8.00	7.80	7.56	7.17	7.57
28.	6.86	6.71	6.70	6.83	7.36	6.21
29.	7.71	7.07	7.60	7.28	7.14	7.64
30.	7.29	7.21	7.50	7.11	6.64	7.86

TABLE 5.2
CORRELATION MATRIX OF RANK ORDERING THIRTY COMMUNICATION
BEHAVIORS BY COUNTRY, ORGANIZATIONAL TYPE, COGNITIVE
COMPLEXITY

	U.S.	AUST.	SERVICE	I/C	HIGH CC	LOW CC
		.88		.84	.85R	

* Significant $p < .05$.
There were virtually identically high correlations between the three paradigms in the rank ordering of the thirty communication behaviors.

TABLE 6.1
MEAN RANKING OF AMOUNT OF TIME SPENT
ON JOB NEED COMMUNICATION
BY COUNTRY (PARADIGM: NATIONALITY)

COMMUNICATION ITEM	TOTAL MEAN	U.S. MEAN	AUST. MEAN	F
1.	6.68	7.36	6.00	3.48
2.	6.75	6.86	6.64	0.13
3.	6.36	6.50	6.21	0.09
4.	4.25	3.79	4.71	0.79
5.	4.81	4.64	5.00	0.37
6.	5.18	5.50	4.86	0.47
7.	4.86	4.29	5.43	1.39
8.	4.21	3.86	4.57	0.74
9.	5.89	5.57	6.21	1.56
10.	5.82	6.29	5.36	1.93

* Significant $p < .05$.
There were no significant differences in rank ordering the amount of time spent on job communication function items using analysis from the nationality paradigm.

TABLE 6.2
MEAN RANKING OF AMOUNT OF TIME SPENT
ON JOB NEED COMMUNICATION
BY ORGANIZATIONAL TYPE (PARADIGM: CULTURAL)

COMMUNICATION ITEM	TOTAL MEAN	SERVICE MEAN	I/C MEAN	F
1.	6.68	7.10	6.44	0.45
2.	6.75	7.50	6.33	0.79
3.	6.36	6.40	6.33	0.01
4.	4.25	3.50	4.67	0.83
5.	4.81	4.30	5.11	0.91
6.	5.18	4.90	5.33	0.31
7.	4.86	4.50	5.06	0.21
8.	4.21	4.60	4.00	0.40
9.	5.89	5.80	5.94	0.08
10.	5.82	5.90	5.78	0.03

* Significnt $p < .05$.
There were no significant differences in rank ordering the time spent on job communication functions using analysis from the organizational cultural paradigm.

TABLE 6.3
MEAN RANKING OF AMOUNT OF TIME SPENT
ON JOB NEED COMMUNICATION
BY COGNITIVE COMPLEXITY (PARADIGM: PERSONALITY)

COMMUNICATION ITEM	TOTAL MEAN	HIGH C.C. MEAN	LOW C.C. MEAN	F
1.	6.68	5.36	8.00	9.30**
2.	6.75	5.93	7.57	1.80
3.	6.36	6.21	6.50	0.09
4.	4.25	4.79	3.71	0.98
5.	4.81	5.29	4.36	1.48
6.	5.18	5.64	4.71	1.27
7.	4.86	5.57	4.14	1.94
8.	4.21	4.43	4.00	0.35
9.	5.89	5.71	6.07	0.31
10.	5.82	5.71	5.93	0.25

* Significant $p < .05$.
** Significant $p < .01$.
There was a significant difference in rank ordering time spent on job communication function on item one using analysis from personality paradigm.

TABLE 6.4
MEAN RANKING OF AMOUNT OF TIME SPENT
ON JOB NEED COMMUNICATION
BY SPECIFIC ORGANIZATION

COMMUNICATION ITEM	#1 MEAN	#2 MEAN	#3 MEAN	#4 MEAN	#5 MEAN	#6 MEAN	F
1.	6.67	5.60	9.25	5.00	4.33	8.60	1.70
2.	6.11	6.80	8.75	10.00	4.00	8.20	1.19
3.	6.11	5.60	8.25	9.00	4.67	7.20	0.81
4.	4.67	4.80	2.00	4.00	6.67	2.20	1.14
5.	5.44	5.40	3.00	1.00	7.33	3.20	3.73*
6.	5.56	4.40	5.25	3.00	5.00	5.40	0.40
7.	4.78	5.60	3.50	6.00	6.33	3.40	0.51
8.	3.56	4.80	2.50	7.00	5.67	4.40	0.85
9.	5.78	6.40	6.50	8.00	5.33	5.20	1.64
10.	6.33	5.60	6.00	2.00	5.67	6.20	0.91

* Significant $p < .05$.
There was a significant difference in rank ordering time spent on job commucation functions on item five using analysis from the specific organization perspective.

TABLE 7.1
MEAN RANKING OF ATTITUDE TOWARD CHANGING FUNCTION
ON FOUR DIFFERENT ASPECTS OF FUNCTION CHANGE
BY COUNTRY (PARADIGM:NATIONALITY)

COMMUNICATION FUNCTION	TOTAL MEAN	U.S. MEAN	AUST. MEAN	F
1.	6.82	7.57	6.07	2.35
2.	6.96	7.57	6.36	2.62
3.	6.68	7.21	6.14	1.97
4.	7.21	8.00	6.43	3.53

* Significant $p < .05$.

TABLE 7.2
MEAN RANKING OF ATTITUDE TOWARD CHANGING ROLE
ON FOUR DIFFERENT ASPECTS OF ROLE CHANGE
BY COUNTRY (PARADIGM: NATIONALITY)

COMMUNICATION ROLE	TOTAL MEAN	U.S. MEAN	AUST. MEAN	F
1.	6.61	7.21	6.00	1.59
2.	7.32	8.07	6.57	5.82*
3.	7.07	7.93	6.21	6.27*
4.	7.21	8.21	6.21	6.70*

*Significant $P < .05$

TABLE 7.3
MEAN RANKING OF ATTITUDE TOWARD CHANGING FUNCTION
OF FOUR DIFFERENT ASPECTS OF FUNCTION CHANGE
BY ORGANIZATIONAL TYPE (PARADIGM:CULTURAL)

COMMUNICATION FUNCTION	TOTAL MEAN	Service MEAN	I/C. MEAN	F
1.	6.82	7.70	6.33	1.76
2.	6.96	7.70	6.56	2.09
3.	6.68	7.50	6.22	2.63
4.	7.21	8.00	6.79	1.84

*Significant $p < .05$.

TABLE 7.4
MEAN RANKING OF ATTITUDE TOWARD CHANGING ROLE
OF FOUR DIFFERENT ASPECTS OF ROLE CHANGE
BY ORGANIZATIONAL TYPE (PARADIGM: CULTURAL)

COMMUNICATION ROLE	TOTAL MEAN	Service MEAN	I/C. MEAN	F
1.	6.61	6.80	6.50	0.09
2.	7.32	7.70	7.11	0.69
3.	7.07	7.60	6.78	1.11
4.	7.21	8.00	6.78	1.96

*Significant $p < .05$

TABLE 7.5
MEAN RANKING OF ATTITUDE TOWARD CHANGING FUNCTION
OF OUR DIFFERENT ASPECTS OF FUNCTION CHANGE
BY COGNITIVE COMPLEXITY (PARADIGM: PERSONALITY)

COMMUNICATIN FUNCTION	TOTAL MEAN	HIGH C.C. MEAN	LOW C.C. MEAN	F
1.	6.82	6.29	7.36	1.15
2.	6.96	6.93	7.00	0.01
3.	6.68	6.43	6.93	0.41
4.	7.21	6.93	7.50	0.42

*Signficant $p < .05$.

TABLE 7.6
MEAN RANKING OF ATTITUDE TOWARD CHANGING ROLE
OF FOUR DIFFERENT ASPECTS OF ROLE CHANGE
BY COGNITIVE COMPLEXITY (PARADIGM: PERSONALITY)

COMMUNICATION ROLE	TOTAL MEAN	HIGH C.C. MEAN	LOW C.C MEAN	F
1.	6.61	6.00	7.21	1.59
2.	7.32	7.29	7.36	0.01
3.	7.07	7.00	7.14	0.04
4.	7.21	6.93	7.50	0.44

* Significant $p < .05$.

TABLE 7.7
MEAN RANKING OF ATTITUDE TOWARD CHANGING FUNCTION
OF FOUR DIFFERENT ASPECTS OF FUNCTION CHANGE
BY SPECIFIC ORGANIZATION

COMMUNICATION FUNCTION	#1 MEAN	#2 MEAN	#3 MEAN	#4 MEAN	#5 MEAN	#6 MEAN	F
1.	7.22	7.00	6.00	1.00	5.67	8.70	1.59
2.	7.56	7.80	5.50	1.00	6.33	7.60	3.91**
3.	7.22	7.00	6.25	1.00	6.67	9.00	4.29**
4.	7.78	7.00	6.25	1.00	6.67	9.00	3.08*

* Signficant $p < .05$. **Significant $p < .01$.

TABLE 7.8
MEAN RANKING OF ATTIDUDE TOWARD CHANGING ROLE
OF FOUR DIFFERENT ASPECTS OF ROLE CHANGE
BY SPECIFIC ORGANIZATION

COMMUNICATION ROLE	#1 MEAN	#2 MEAN	#3 MEAN	#4 MEAN	#5 MEAN	#6 MEAN	F
1.	7.11	6.20	8.25	1.00	3.67	7.40	3.05*
2.	8.11	7.40	6.50	1.00	6.67	8.00	6.45**
3.	8.00	7.40	6.05	1.00	6.33	7.80	4.48**
4.	7.78	7.00	6.75	1.00	6.33	9.00	3.57*

* Significant $p < .05$.

TABLE 8.1
FACTOR STRUCTURE OF SIXTY SPECIFIC COMMUNICATION BEHAVIORS
BY COUNTRY (PARADIGM: NATIONALITY)

U.S. FACTOR 1 ITEM	2 ITEM	3 ITEM	4 ITEM		AUSTRALIA FACTOR 1	2 ITEM	3 ITEM	4 ITEM	ITEM
	2,22	5,6	8,9	10,25		1,3	13,14	2,11	24,40
	23,39	13,15	19,28	27,41		4,8	38,39	25,45	44,4
	40,44	32,35	46,56	50,57		22,27	55		54
	54,60	38,45				41,42			
	60					48			

TABLE 8.2
FACTOR STRUCTURE OF SIXTY SPECIFIC COMMUNICATION BEHAVIORS
BY TYPE OF ORGANIZATION (PARADIGM:CULTURAL)

SERVICE FACTOR	1 ITEM	2 ITEM	3 ITEM		I/C FACTOR	1	2 ITEM	3 ITEM	ITEM
	2,3,	1,4	13,19				2,8	5,13	3,4
	10,32	36,40	25,26				14,22	19,25	11,21
	33,39	41,55	30,53				32,33	30,59	41,51
	42,46	56	59				34,40		52
							40,46		

TABLE 8.3
FACTOR STRUCTURE OF SIXTY SPECIFIC COMMUNICATION BEHAVIORS
BY COGNITIVER COMPLEXITY (PARADIGM: PERSONALITY)

HICH C.C. FACTOR	1 ITEM	2 ITEM	3 ITEM		LOW C.C. FACTOR	1	2 ITEM	3 ITEM	ITEM
	3,4	1,8	10,25				2,3	13,21	4,12
	10.21	17,19	28,47				5,10	38,44	20,29
	41,43	23,27	48,49				14,19	38,44	29,33
	50,57	37,42	58				25,26	49,51	37,41
							31,32	55,56	42,46

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